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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,378	01/02/2004	Kobayashi Shozo	1594.1303	9137

21171 7590 10/05/2004

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EXAMINER

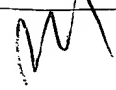
LEUNG, PHILIP H

ART UNIT PAPER NUMBER

3742

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,378	Applicant(s) SHOZO ET AL. 	
	Examiner Philip H Leung	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14, 20-23, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 8, 15-19 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1-2-2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The drawings filed 1-2-2004 are acceptable.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1, 3, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (US 4,337,384).

Tanaka shows a microwave convectional oven comprising a cabinet 1 to define a cooking cavity 2 therein, the cooking cavity being open at a front thereof; a fan chamber 20 defined by recessing a rear wall 19 of the cooking cavity at a predetermined area to a predetermined depth; an air circulation fan 17 installed in the fan chamber to circulate air of the cooking cavity; a heater 15 installed in the fan chamber to heat the air; and a chamber cover 18 mounted to the rear wall of the cooking cavity to cover an open front of the fan chamber, the chamber cover having a plurality of air suction ports 21 at a central area thereof, with a plurality of air distribution ports 22 provided along an edge of the chamber cover to guide the air from the fan chamber to the edge of the chamber cover to discharge the air to the cooking cavity (see Figures 2, 3 and 6-9 and col. 3, line 47 – col. 4, line 2). In regard to claim 26, see the abstract, lines 7-10 and col. 2, lines 20-28).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2 are rejected under 35 U.S.C. 103(a) as being obvious over Tanaka et al (US 4,337,384), in view of McFadden et al (US 6,376,817).

As set forth above, Tanaka shows every feature as claimed except for the shape of the air distribution ports. McFadden shows that it is well known in the art of microwave convectional ovens to form the air distribution ports in the shape of protuberant nozzles 26 to increase air speed toward the food more directly (see Figure 1, col. 6, lines 10-67 and col. 7, lines 41-56). It would have been obvious to an ordinary skill in the art at the time of invention to modify Tanaka to use protuberant nozzles as air distribution ports for better heating efficiency and better baking result, in view of the teaching of McFadden.

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7. Claims 4, 6, 7, 9-12 and 23 are rejected under 35 U.S.C. 103(a) as being obvious over Tanaka et al (US 4,337,384), in view of Takakura (JP 56-102623).

As set forth above, Tanaka shows every feature as claimed except for the use of a coating on the chamber surfaces. Takakura shows that it is well known in the art of microwave ovens to coat the oven chamber surfaces with an insulating material to prevent generation of sparks in the oven (see Figure 1 and the English abstract). It would have been obvious to an ordinary skill in the art at the time of invention to modify Tanaka to use a coating on the chamber surfaces to reduce sparks for a safer microwave cooking device, in view of the teaching of Takakura. In regard to claims 6, 7 and 12, Tanaka also shows the use of setscrews for mounting the fan assembly (see Figure 3). The exact arrangement would be a matter of engineering variations. In regard to claim 23, Tanaka shows the use of a fan for cooling the magnetron 34 and the transformer of a microwave oven to be routine (see Figures 3, 5 and 6).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 4,337,384), in view of Takakura (JP 56-102623), as applied to claims 4, 6, 7, 9-12 and 23 above, and further in view of McFadden et al (US 6,376,817).

As set forth above, Tanaka combined with Takakura shows every feature as claimed except for the shape of the air distribution ports. McFadden shows that it is well known in the art of microwave convectional ovens to form the air distribution ports in the shape of protuberant nozzles 26 to increase air speed toward the food more directly (see Figure 1, col. 6, lines 10-67 and col. 7, lines 41-56). It would have been obvious to an ordinary skill in the art at

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the time of invention to modify Tanaka to use protuberant nozzles as air distribution ports for better heating efficiency and better baking result, in view of the teaching of McFadden.

9. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 4,337,384), in view of Takakura (JP 56-102623), as applied to claims 4, 6, 7, 9-12 and 23 above, and further in view of Yasuoka (US 3,692,968).

As set forth above, Tanaka combined with Takakura shows every feature as claimed except for the use of a mode stirrer. Yasuoka shows that it is well known in the art of microwave ovens to use a mode stirrer for stirring the microwave supplied from the magnetron to the cooking chamber (see Figures 1 and 4 and col. 2, line 58 - col. 3, line 3). It would have been obvious to an ordinary skill in the art at the time of invention to modify Tanaka to use a rotating stirrer for stirring the microwave radiation pattern for more uniform and better cooking result, in view of the teaching of Yasuoka.

10. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being obvious over Tanaka et al (US 4,337,384), in view of Fleiter et al (US 4,970,372).

As set forth above, Tanaka shows every feature as claimed except for the use of a heat shield mounted on the outer surface of the cooking chamber. Fleiter shows that it is well known in the art of convectional ovens to use a heat shield 14 between the fan motor¹² and the fan chamber 10 to protect the motor (see the Figure and col. 3, lines 32-46). It would have been obvious to an ordinary skill in the art at the time of invention to modify Tanaka to use a heat shield to protect the motor from overheating, in view of the teaching of Fleiter.

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11. Claims 8, 15-19 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

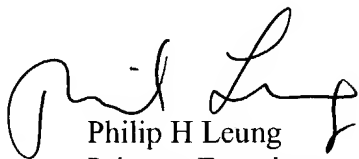
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hotard et al (US 5,601,070) and Hernandez Burgos et al (US 6,615,819 B1) are further cited to show convection ovens having various claimed features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (703) 308-1710.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (703) 305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
9-29-2004